demultiplexer further generating messages about the stored data and their location in the data buffer; and

a control unit receiving the generated messages and providing in response thereto instructions about the stored data.

2.   (Amended) The decoder system of Claim 1 wherein the data bytes are DVD or DVB data bytes.

3.   (Amended) The decoder system of Claim 1 wherein the messages are recorded on tags containing information about the time stamp of the data and their storage location in the data buffer, the tags being stored in a memory separate from the data buffer.

4.   (Amended) The decoder system of Claim 3 wherein in response to a tag, the control unit generates a task definition packet specifying the location of video data stored in the data buffer.

5.   (Amended) The decoder system of Claim 4 wherein in response to the task definition packet, a the decoder system fetches the video data from the data buffer and decodes it at the specified time.

6.   (Amended) The decoder system of Claim 5 wherein the control unit responds to the tag during the intervals between occurrences of a synchronization signal.

7. (Amended) The decoder system of Claim 6 further comprising a video decoder which fetches the video data from the data buffer and decodes it at the specified time during the intervals between occurrences of the synchronization signal.

8. (Amended) The decoder system of Claim 7 wherein during each synchronization cycle, the control unit generates task definition packets for decoding by the video decoder during the next synchronization cycle, the synchronization cycle being the time period between two successive synchronization signals.

9. (Amended) The decoder system of Claim 8 wherein in a steady state and during normal operating conditions of the decoder system, the control unit is interrupted only during the occurrence of a synchronization signal for audio and video decoding and presentation.

10. (Amended) The decoder system of Claim 9 wherein the video decoder fetches and decodes data in response to a task definition packet.

11. (Amended) The decoder of Claim 10 wherein the control unit comprises a central processing unit.

12. (Amended) The decoder system of Claim 1 further comprising:

an audio decoder retrieving audio data stored in the data buffer and decoding the retrieved audio data; and

a video decoder retrieving video data stored in the data buffer and decoding the retrieved video data.

13.   (Amended) The decoder system of Claim 12 wherein audio decoder detects the occurrence of a sync word in an audio data frame.

14.   (Amended) The decoder system of Claim 13 wherein central processing unit determines the presentation time of an audio data frame using the time stamp of the associated data packet extracted by the stream demultiplexer and the sync word detected by the audio decoder.

15.   (Amended) The decoder system of Claim 12 further comprising a set of data buffers coupled to the audio decoder and the video decoder and comprising an audio output buffer and video frame stores.

16.   (Amended) The decoder system of Claim 15 further comprising:

an audio output processor coupled to the audio output buffer retrieving the decoded audio data and processing thereof; and

a video output processor coupled to the video frame stores retrieving the decoded video data and processing thereof.

17.   (Amended) The decoder system of Claim 16 further comprising:

an audio digital-to-analog converter coupled to the audio output processor and converting the processed digital data to analog data; and

a video display coupled to the video output processor and displaying the processed video data.

18.   (Amended) The decoder system of Claim 1 further comprising an interface coupled to the stream demultiplexer, the interface receiving a DVD bit stream, and the interface transmitting a DVD byte stream to the stream demultiplexer.

19.   (Amended) The decoder system of 1 further comprising a network port coupled to the stream demultiplexer, the network port receiving a DVB bit stream, and the network port transmitting a DVB byte stream to the stream demultiplexer.

20.   (Amended) The decoder system of Claim 19 further comprising:

a timer maintaining local current time; and

a clock generator coupled to the timer and maintaining clock references.

21.   (Amended) The decoder system of Claim 1 wherein the data buffer comprises a message queue storing messages from the stream demultiplexer.

22.   (Amended) The decoder system of Claim 3 wherein the data buffer comprises a video buffer, an audio buffer, a control data buffer and a queue of the tags, each tag comprising a pointer to a start code in the video buffer or to an audio sync frame in the audio buffer or to a beginning of a packet in the control data buffer.

23.   (Amended) The decoder system of Claim 21 wherein the decoder is implemented as an ASIC.

24.   (Amended) A method for decoding data bytes having timing information comprising:

demultiplexing, depacketizing, and storing the demultiplexed and depacketized data bytes in a data buffer without their timing information being stored in the data buffer;

generating messages about the stored data bytes to a control unit; and

generating instructions about the stored data bytes using the control unit.

25.   (Amended) The method of Claim 24 wherein the demultiplexing and depacketizing data bytes comprises demultiplexing and depacketizing DVD or DVB data bytes.

26.   (Amended) The method of Claim 24 wherein the act of generating messages about the stored data bytes to a control unit comprises generating tags containing information about the time stamps of the data and their storage location in the data buffer, the tags being stored in a memory separate from the data buffer.

27.   (Amended) The method of Claim 26 further comprising generating a task definition packet in response to the generation of the tag, each task definition packet specifying the location of the stored data.

28.   The method of Claim 27 wherein the act of generating a task definition packet occurs during the intervals between occurrences of a synchronization signal.

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29.   The method of Claim 28 further comprising fetching and decoding the stored data in response to the generation of a task definition packet.

30.   The method of Claim 29 wherein the act of fetching and decoding the stored data in response to the generation of a task definition packet occurs during the intervals between occurrences of a synchronization signal.

31.   (Amended) The method of Claim 30 wherein for each data packet the act of generating a task definition packet occurs one synchronization signal cycle before the act of fetching and decoding, the synchronization cycle being the time period between two successive synchronization signals.

32.   (Amended) The method of Claim 31 further comprising

generating interrupt requests only during the occurrence of a synchronization signal when in a steady state and under normal operating conditions.

33.   (Amended) The method of Claim 32 wherein the control unit is a central processing unit.

34.   (Amended) The method of Claim 33 further comprising:

retrieving the stored audio data and decoding the retrieved audio data using an audio decoder; and

retrieving the stored video data and decoding the retrieved audio data using a video decoder.

35.   The method of Claim 34 further comprising detecting the sync word of an audio data frame using the audio decoder.

36.   (Amended) The method of Claim 35 further comprising determining the presentation time of the audio data frame using the time stamp of the data packet and the sync word of the audio data frame.

37.   (Amended) The method of Claim 36 further comprising storing the decoded audio data and the decoded video data in buffers.

38..   (Amended) The method of Claim 37 further comprising:

retrieving the decoded audio data from the buffers and processing and supplying the processed data to an audio digital-to-analog converter; and

retrieving the decoded video data from the buffers and processing and supplying the processed data to a video display.

Please add new Claims 39 and 40 as follows:

--39.   A decoder system comprising:

a stream demultiplexer demultiplexing and depacketizing data bytes and storing the demultiplexed and depacketized data bytes in a data buffer, the stream demultiplexer generating messages about the stored data and their location in the data buffer;

a control unit receiving the generated messages and providing in response thereto instructions about the stored data;

an audio decoder retrieving audio data stored in the data buffer and decoding the retrieved audio data; and

a video decoder retrieving video data stored in the data buffer and decoding the retrieved video data.

wherein the audio decoder detects the occurrence of a sync word in an audio data frame.

40.   A method for decoding data bytes comprising:

demultiplexing, depacketizing, and storing the demultiplexed and depacketized data bytes in a data buffer;

generating messages about the stored data bytes to a control unit;

generating instructions about the stored data bytes using the control unit;

retrieving the stored audio data and decoding the retrieved stored audio data using an audio decoder;

retrieving the stored video data and decoding the retrieved stored video data using a video decoder; and

detecting the sync word of an audio data frame using the audio decoder.--